

## UNCLASSIFIED

<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>						
COST ( <i>In Thousands</i> )	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	0	184842	190650	160295	163655	160266	152504	155630	Continuing	Continuing
1155 Discrimination *	0	18208	24568	26794	22095	24230	15535	15827	Continuing	Continuing
3153 Systems Arch and Engineering *	0	16084	15789	14455	14564	14535	13795	14130	Continuing	Continuing
3352 Modelling and Simulation **	0	48341	29350	29306	30791	27651	27983	28315	Continuing	Continuing
3353 JNTF *	0	51815	56088	55037	60027	58354	59104	60514	Continuing	Continuing
3354 Targets ***	0	1952	2320	0	0	0	0	0	Continuing	Continuing
3360 Test Resources	0	41428	51909	23759	25003	24150	24267	24756	Continuing	Continuing
4000 Operational Support	0	7014	10626	10944	11175	11346	11820	12088	Continuing	Continuing
<p>* The funding in this project for FY99-03 was transferred from PEs 0603871C and 0603872C. See those R2s for FY98 funding.</p> <p>** The funding in this project for FY99-03 was transferred from PEs 0603173C, 0603871C and 0603872C. See those R2s for FY98 funding.</p> <p>*** The funding in this project for FY99-03 was transferred from PE 0603872C. See that R-2 for FY98 funding.</p> <p><b><u>A. Mission Description and Budget Item Justification</u></b></p> <p>The Ballistic Missile Defense (BMD) Technical Operations Programs are comprised of the centrally managed functional capabilities required to assure the execution of Theater Missile Defense (TMD), Family of Systems Engineering and Integration (FOS E&amp;I), National Missile Defense (NMD), and Technology programs. Functional areas include phenomenology data collection and analysis, test resources and facilities, modeling and simulation, and BMD architecture analysis. These highly specialized BMD-specific investments provide the threat representative data and derived requirements, modeling capabilities, and test facilities necessary to meet the aggressive development, test, and deployment schedules of the TMD and NMD systems. These centrally managed programs will be executed in a manner integrated with BMDO's mission areas.</p> <p>The catalyst for reorganization of BMDO PEs, including the creation of this PE, was the fundamental shift in the Department's management approach for both the NMD "3+3" program and TMD "Family of Systems". Technical Operations Programs were formerly distributed and managed within the NMD, TMD, and Technology mission areas. This required OSD and Congress to look across multiple PEs to understand the scope of these investments. Under a single new PE, Technical Operations programs will be more identifiable and managed in a more streamlined manner. The Technical Operations Program Element establishment was accomplished and first reported in BMDO's FY99-03 Program Objective Memorandum submission.</p>										
<i>Page 1 of 39 Pages</i>						Exhibit R-2 (PE 0603874C)				

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## BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE  
February 1999

BUDGET ACTIVITY

**4 - Demonstration and Validation**

PE NUMBER AND TITLE

**0603874C BMD Technical Operations**

This project is assigned to the Budget Activity and Program Element codes as identified in this descriptive summary in accordance with existing Department of Defense policy. Further justification of the Budget Activity code assigned to each Program Element is contained within the Brief Description of Element section of each Program Element Summary.

C. **Acquisition Strategy:** See Individual R2 summaries.

<b><u>B. Program Change Summary</u></b>	<b><u>FY 1998</u></b>	<b><u>FY 1999</u></b>	<b><u>FY 2000</u></b>	<b><u>FY 2001</u></b>
Previous President's Budget ( <u>FY 1999</u> PB)	0	190147	161136	165802
Congressional Adjustments		1000		
Appropriated Value		191147		
Adjustments to Appropriated Value				
a. Congressional Reductions (FFRDC, Inflation, etc)		-6191		
b. OSD Reductions		-114		
c. Emergency Supplemental				
Adjustments to Budget Years Since <u>FY 1999</u> PB				
Current Budget Submit ( <u>FY 2000 / 2001</u> PB)	0	184842	190650	160295

Change Summary Explanation:

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>1155</b>	
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
1155 Discrimination *	0	18208	24568	26794	22095	24230	15535	15827	Continuing	Continuing
<p>* The funding in this project for FY99-03 was transferred from PEs 0603871C and 0603872C. See those R2s for FY98 funding.</p> <p><b>A. <u>Mission Description and Budget Item Justification</u></b></p> <p>This program provides the U.S. with the data and predictive tools to generate high confidence target signatures for Ballistic Missile Defenses (BMD). This is a critical adjunct to the evaluation of BMD system performance across the full spectrum of threats and engagement scenarios. This program provides data collection sensors and instruments for use on live-fire missions and provides analysis of the resulting test data. This program provides predictive models of target signatures in both Radar and Infrared spectrums. This program evaluates and develops algorithms for the critical functions of discrimination, target handover, and aimpoint selection. This program provides for data storage and retrieval of all BMDO sponsored tests per statutory requirements.</p> <p>Data collection and exploitation of data will be achieved by ground, air, and sea based assets for domestic and foreign tests. This will include collection by assets that are owned or operated by other agencies for use by BMDO.</p> <p>Algorithms and Analysis work is divided into optical and radar regimes. Promising acquisition, discrimination, track, and aimpoint algorithms are coded and installed at the Lexington Discrimination System (LDS) for evaluation in a real-time operating mode using real data and simulated data. Algorithms from acquisition programs are evaluated for effectiveness in a variety of targets and scenarios.</p> <p>Models provide predictive signature codes ranging from high-fidelity single component models to integrated model architecture that combine several components into a composite modeling capability. Component models follow the subject discipline of hardbody targets, missile plumes, and backgrounds. Codes are validated and upgraded as analysis of measured data becomes available and understood.</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• 0 FY98 funding for this project was contained in PE's 0603871C and 0603872C,</li> </ul> <p>Total 0</p> <p><b>FY 1999 Planned Program:</b></p>										
<div style="display: flex; justify-content: space-between;"> <span>Project 1155</span> <span>Page 3 of 39 Pages</span> <span>Exhibit R-2A (PE 0603874C)</span> </div>										

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<ul style="list-style-type: none"> <li>• 8758 Algorithms and Analysis: Continue data analysis support for TMD systems in Dem/Val and EMD. Provide support for TMD radar/optical discrimination algorithms and architectures for advanced TMD threats and pen aids. Develop real-time algorithms for battlefield learning using neural networks, field data, and simulations on LDS. Develop algorithms for real-time sensor resource allocation to support threat-adaptive algorithm architectures.</li> <li>• 6230 Models: Deliver validated signature models for high priority engagement scenarios. Continue participation in international technical exchange programs in the areas of optical and radar discrimination, reentry, and signature phenomenology.</li> <li>• 3220 IR Data Collection Upgrade: Begin upgrade to support both NMD and TMD Test &amp; Evaluation Data Collection.</li> </ul>	<p>Total 18208</p> <p><b>FY 2000 Planned Program:</b></p> <p>7869 Algorithms and Analysis: Data analysis support for TMD systems in Dev/Val and EMD. Provide support for NMD radar/optical discrimination algorithms and architectures for advanced NMD threats and pen aids. Develop algorithms for real-time sensor resource allocation to support threat-adaptive algorithm architectures.</p> <p>1975 Models: Continue development and validation of high fidelity signature and environment codes.</p> <p>14724 IR Data Collection Upgrade: Platform upgrade to support both TMD and NMD flight test data collection and intelligence means.</p> <p>Total 24568</p> <p><b>FY 2001 Planned Program:</b></p> <p>7658 Algorithms and Analysis: Data analysis support for TMD systems in Dev/Val and EMD. Provide support for NMD radar/optical discrimination algorithms and architectures for advanced NMD threats and pen aids. Develop algorithms for real-time sensor resource allocation to support threat-adaptive algorithm architectures.</p> <p>3126 Models: Continue development and validation of high fidelity signature and environment codes.</p> <p>16010 IR Data Collection Upgrade: Platform upgrade to support both TMD and NMD flight test data collection and intelligence means.</p> <p>Total 26794</p>																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 5px;"><b>B. Other Program Funding Summary</b></th> <th style="text-align: center; padding: 5px;"><u>FY 1998</u></th> <th style="text-align: center; padding: 5px;"><u>FY 1999</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2000</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2001</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2002</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2003</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2004</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2005</u></th> <th style="text-align: center; padding: 5px;">To <u>Compl</u></th> <th style="text-align: center; padding: 5px;">Total <u>Cost</u></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">1155 NMD Program, PE 0603871C</td> <td style="text-align: center; padding: 5px;">17932</td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">1155 Joint TMD, PE 0603872C</td> <td style="text-align: center; padding: 5px;">31579</td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> </tbody> </table>										<b>B. Other Program Funding Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>	1155 NMD Program, PE 0603871C	17932										1155 Joint TMD, PE 0603872C	31579									
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<p><b>C. Acquisition Strategy:</b> This project funds its efforts through executing agents in the Air Force, Army, Navy and BMDO via existing contracts.</p>																																										
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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>							DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>1155</b>	
ODA Model and simulation support	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q					
Delivered SAMM 2.0	2Q								
SHARC code 4.1	2Q								
Release SSGM 98	1Q								
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## BMDO RDT&amp;E COST ANALYSIS (R-3)

DATE

February 1999

BUDGET ACTIVITY

4 - Demonstration and Validation

PE NUMBER AND TITLE

0603874C BMD Technical Operations

PROJECT

1155

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. IR Sensor Upgrade	C, CPFF	TBD	0	3100	1Q99	4900	1Q00	3500	1Q01	10500	22000	
b. IR Sensor Upgrade	C, CPFF	Raytheon,TX & CA	0	120	1Q99	9824	1Q00	12510	1Q01	47546	70000	
Subtotal Product Development:				3220		14724		16010		58046	92000	

Remark:

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. OSC SW Dev	CPFF	TBE, Huntsville AL		547	1Q99	499	1Q00	494	1Q01		1540	
b. Bkgnds SW Dev	Allot	AFRL, MA		1020		24		502			1546	
c. SSGM Software Dev	Allot	NRL, Wash DC		400		400		400			1200	
d. SSGM SW Dev	CPFF	PRA, Calif Other, VA		300		0		0		300	600	
e. SSGM SW Dev	C,CPFF	TBD		1100	2/99	1100	1Q00	1300	1Q01	Cont.	3500	
f. Cont. Eng Supprt	C, CPFF	Other, VA		925	1Q99	909	1Q00	888	1Q01	Cont.	2722	
Subtotal Support Costs:				4292		2932		3584		300	11108	

Remark:

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Mission Planning supt.	Other			553	1Q99	0		0		0	553	
b. MESAR Trials	MIPR	PEO-TAD, Wash		800		108		0		0	908	
a.												
b.												
c.												
Subtotal Test and Evaluation:				1353		108					1461	

Remark:

Project 1155

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Exhibit R-3 (PE 0603874C)

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BMDO RDT&E COST ANALYSIS (R-3)										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>1155</b>		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Plumes Analysis	Allotment	AFRL, CA		1030		24		502		Cont.	1556	
b. Radar Analy / Supprt	MIPR	MIT/LL Lex, MA		4359	1Q99	3355	1Q00	3150	1Q01	Cont.	10864	
c. Optical analy (ODA)	C, CPFF	NRC, H'sville AL		2915	1Q99	2620	1Q00	2916	1Q01	Cont.	8451	
d. Prog Man Pers	Allotment	SMDC, H'sville AL		898		745		544		Cont.	2187	
e. Other Intl prgms	Other			141		60		88			289	
a.												
Subtotal Management Services:				9343		6804		7200			23347	
Remark:												
Project Total Cost:				18208		24568		26794		58346	127916	
Remark:												
Project 1155				Page 7 of 39 Pages				Exhibit R-3 (PE 0603874C)				

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BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>3153</b>		
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
3153 Systems Arch and Engineering *	0	16084	15789	14455	14564	14535	13795	14130	Continuing	Continuing
<p>* The funding in this project for FY99-03 was transferred from PEs 0603871C and 0603872C. See those R2s for FY98 funding.</p> <p><b>A. <u>Mission Description and Budget Item Justification</u></b></p> <p>This project supports the Office of the Chief Architect/Engineer to address Joint Systems Architecture/Engineering (JSAE) issues in a coordinated and synergistic manner across all National Missile Defense (NMD) and Theater Air and Missile Defense (TAMD) efforts. The office reports directly and independently to the BMDO Director to provide the necessary mission-area oversight of critical BMDO technical issues.</p> <p>Within this project, the BMDO critical JSAE tasks are divided into the areas of Joint Systems Analysis; Baseline and Risk Management; Interfaces and Interoperability (Battle Management/Command, Control, and Communications (BM/C3)); Modeling and Simulation (M&amp;S) Requirements and Standards; Developmental Planning; and Test and Evaluation (T&amp;E). The project provides a technical assessment of the expected effectiveness of major programs under development and requirements for supporting technology. Through FY98, work was funded through two program elements, one for Joint TAMD and the other for NMD.</p> <p>The primary thrust of the work is to analytically show the need for and expected performance of different defense systems under development to handle current and projected threats. The systems-level architecture/engineering analysis supports efforts to determine the expected operational performance and effectiveness of missile defense systems under development. Models and simulations are used to investigate architecture and system level capability and to resolve critical technical issues related to the development of specific elements of the architecture. Tradeoffs in alternative elements, specific designs, inventory and integration of systems are conducted to determine the most cost effective approach for a particular missile defense mission. Analysis is performed on a continuing basis in order to determine the impact of changing threats, mission requirements, and technological advances. Analysis priorities are determined by the Integrated Analysis Leadership Group (IALG), a group sponsored by the Chief Architect/Engineer with representatives from across BMDO. The remaining core JSAE efforts focus on integrating ongoing efforts across the TAMD and NMD mission areas and developing and implementing policies designed to enhance system and cost performance. These efforts reduce system and architectural risks, improve system interoperability, focus technology planning and prioritization, and integrate T&amp;E and M&amp;S efforts.</p> <p>Through management of the Systems Architecture/Engineering Board (SAEB), this project provides the technical recommendations for missile defense acquisition and budget allocation decisions.</p>										
<div style="display: flex; justify-content: space-between;"> <span>Project 3153</span> <span>Page 8 of 39 Pages</span> <span>Exhibit R-2A (PE 0603874C)</span> </div>										

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<p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>FY98 Funding for this project contained in program elements 0603871C and 0603872C</li> </ul> <p>Total            0</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>11552 Architecture/Engineering Analysis: Through the IALG, develop an overall analysis plan for the BMDO and oversee the analysis process. Participate in engineering trade studies with the TAMD systems engineer. Perform commonality studies on the Upper Tier TMD systems. Continue systems analysis of architecture/system performance and related technical issues as directed by Congress, the Department of Defense, the BMDO Director, and the Chief Architect/Engineer. Direct the Joint Systems Engineering Team (JSET). Manage the systems technology implementation process and develop pre-planned program improvement requirements.</li> <li>4532 Architecture/Engineering Core: Lead BMDO JSAE efforts to develop strategies, policies, and processes. Provide BMDO system-level capability to address emerging system requirements and concerns in a synergistic manner across all NMD and TAMD development efforts and facilitate the translation of operational requirements to joint and combined interoperable systems. Lead BMDO participation in the development and implementation of various BMDO, DoD, Allied, and other Government and commercial initiatives relating to BMDO NMD/TMD BM/C3 development. Conduct Joint Technical Architecture (JTA) compliance engineering; hold T&amp;E Steering Group (TESG) and BMD Operation T&amp;E Council (BOTEC) meetings; oversee High Level Architecture (HLA) compliance and migration; and produce the BMDO Open Systems Assessment and the Test and Experiment Activities Summary (TEAS).</li> </ul> <p>Total            16084</p> <p><b>FY 2000 Planned Program:</b></p> <ul style="list-style-type: none"> <li>11918 Architecture/Engineering Analysis: Through the IALG, develop an overall analysis plan for the BMDO and oversee the analysis process. Participate in engineering trade studies with the TAMD systems engineer. Perform commonality studies on the Upper Tier TMD systems. Continue systems analysis of architecture/system performance and related technical issues as directed by Congress, the Department of Defense, the BMDO Director, and the Chief Architect/Engineer. Direct the Joint Systems Engineering Team (JSET). Manage the systems technology implementation process and develop pre-planned program improvement requirements.</li> <li>3871 Architecture/Engineering Core: Lead BMDO JSAE efforts to develop strategies, policies, and processes. Provide BMDO system-level capability to address emerging system requirements and concerns in a synergistic manner across all NMD and TAMD development efforts and facilitate the translation of operational requirements to joint and combined interoperable systems. Lead BMDO participation in the development and implementation of various BMDO, DoD, Allied, and other Government and commercial initiatives relating to BMDO NMD/TMD BM/C3 development. Conduct Joint Technical Architecture (JTA) compliance engineering; hold T&amp;E Steering Group (TESG) and BMD Operation T&amp;E Council (BOTEC) meetings; oversee High Level Architecture (HLA) compliance and migration; and produce the BMDO Open Systems Assessment and the Test and Experiment Activities Summary (TEAS).</li> </ul> <p>Total            15789</p>		
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<b>BUDGET ACTIVITY</b> <b>4 - Demonstration and Validation</b>				<b>PE NUMBER AND TITLE</b> <b>0603874C BMD Technical Operations</b>			<b>PROJECT</b> <b>3153</b>																																					
<b>FY 2001 Planned Program:</b> <ul style="list-style-type: none"> <li>• 10394 Architecture/Engineering Analysis: Through the IALG, develop an overall analysis plan for the BMDO and oversee the analysis process. Participate in engineering trade studies with the TAMD systems engineer. Perform commonality studies on the Upper Tier TMD systems. Continue systems analysis of architecture/system performance and related technical issues as directed by Congress, the Department of Defense, the BMDO Director, and the Chief Architect/Engineer. Direct the Joint Systems Engineering Team (JSET). Manage the systems technology implementation process and develop pre-planned program improvement requirements.</li> <li>• 4061 Architecture/Engineering Core: Lead BMDO JSAE efforts to develop strategies, policies, and processes. Provide BMDO system-level capability to address emerging system requirements and concerns in a synergistic manner across all NMD and TAMD development efforts and facilitate the translation of operational requirements to joint and combined interoperable systems. Lead BMDO participation in the development and implementation of various BMDO, DoD, Allied, and other Government and commercial initiatives relating to BMDO NMD/TMD BM/C3 development. Conduct Joint Technical Architecture (JTA) compliance engineering; hold T&amp;E Steering Group (TESG) and BMD Operation T&amp;E Council (BOTEC) meetings; oversee High Level Architecture (HLA) compliance and migration; and produce the BMDO Open Systems Assessment and the Test and Experiment Activities Summary (TEAS).</li> </ul> <p>Total        14455</p>																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;"><b>B. Other Program Funding Summary</b></th> <th><u>FY 1998</u></th> <th><u>FY 1999</u></th> <th><u>FY 2000</u></th> <th><u>FY 2001</u></th> <th><u>FY 2002</u></th> <th><u>FY 2003</u></th> <th><u>FY 2004</u></th> <th><u>FY 2005</u></th> <th style="text-align: center;"><u>To Compl</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> <tr> <td>3153 System Arch &amp; Engineering 0603871C</td> <td style="text-align: center;">4690</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td></td> </tr> <tr> <td>3153 System Arch &amp; Engineering 0603872C</td> <td style="text-align: center;">14143</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td></td> </tr> </table>									<b>B. Other Program Funding Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>	3153 System Arch & Engineering 0603871C	4690	0	0	0	0	0	0	0			3153 System Arch & Engineering 0603872C	14143	0	0	0	0	0	0	0					
<b>B. Other Program Funding Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>																																		
3153 System Arch & Engineering 0603871C	4690	0	0	0	0	0	0	0																																				
3153 System Arch & Engineering 0603872C	14143	0	0	0	0	0	0	0																																				
<p><b>C. Acquisition Strategy:</b> Systems analysis work in this project is contracted. For other JSAE efforts, expertise of Government, Federally Funded Research &amp; Development Center (FFRDC), System Engineering and Integration Contractor (SEIC), and Scientific, Engineering and Technical Assistance (SETA) personnel are leveraged in the execution of project activities, using existing contracts to the maximum extent possible. Specifically, U.S. Army Space and Missile Defense Command (USASMDC) and USAF/Electronic Systems Center (ESC) Government and contractor personnel lead Information Architecture and development efforts; SETA and SEIC contracts provide the core of technical expertise for a variety of JSAE activities; and FFRDC contract vehicles provide state-of-the-art technical expertise in Software Engineering and related technical areas. Additional contractor services will be procured if needed to meet emerging program requirements.</p>																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;"><b>D. Schedule Profile</b></th> <th><u>FY 1998</u></th> <th><u>FY 1999</u></th> <th><u>FY 2000</u></th> <th><u>FY 2001</u></th> <th><u>FY 2002</u></th> <th><u>FY 2003</u></th> <th><u>FY 2004</u></th> <th><u>FY 2005</u></th> </tr> <tr> <td>Prepare Report to Congress on Utility of Sea-Based Assets to NMD</td> <td style="text-align: center;">3Q</td> <td style="text-align: center;">2Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Support Report to Congress on Asia-Pacific Threa</td> <td></td> <td style="text-align: center;">2Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>BMD System Architecture Study</td> <td></td> <td style="text-align: center;">3Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>									<b>D. Schedule Profile</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	Prepare Report to Congress on Utility of Sea-Based Assets to NMD	3Q	2Q							Support Report to Congress on Asia-Pacific Threa		2Q							BMD System Architecture Study		3Q						
<b>D. Schedule Profile</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>																																				
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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>							DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>3153</b>	
BMDO Corporate Lethality Plan		1Q							
Prepare JTA Annual Report		1Q	1Q	1Q	1Q	1Q	1Q	1Q	
BMDO Open Systems Assessment	1Q, 3Q	1Q, 3Q	1Q, 3Q	1Q, 3Q	1Q, 3Q	1Q, 3Q	1Q, 3Q	1Q, 3Q	
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<b>BMDO RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3153</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Subtotal Product Development:												
Remark:												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Subtotal Support Costs:												
Remark:												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Subtotal Test and Evaluation:												
Remark:												
<div style="display: flex; justify-content: space-between;"> <span>Project 3153</span> <span>Page 12 of 39 Pages</span> <span>Exhibit R-3 (PE 0603874C)</span> </div>												

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<b>BMDO RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3153</b>		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.		SPARTA		4540		4400		4000		TBD	12940	
b.		CSC		4500		4300		4000		TBD	12800	
c.		SRS		1200		1200		1100		TBD	3500	
d.		Vanguard Research		1000		1000		700		TBD	2700	
e.		JNTF		449		500		500		TBD	1449	
f.		FFRDC		3500		3500		3400		TBD	10400	
g.		Misc Contract		895		889		755		TBD	2539	
Subtotal Management Services:				16084		15789		14455			46328	
Remark:												
Project Total Cost:				16084		15789		14455			46328	
Remark:												

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>3352</b>		
COST <i>(In Thousands)</i>	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
3352 Modelling and Simulation **	0	48341	29350	29306	30791	27651	27983	28315	Continuing	Continuing
<p>** The funding in this project for FY99-03 was transferred from PEs 0603173C, 0603871C and 0603872C. See those R2s for FY98 funding.</p> <p><b>A. <u>Mission Description and Budget Item Justification</u></b></p> <p>This project ensures timely availability of reliable, cooperative, and cost-effective BMDO and Service-provided Modeling, Simulation, &amp; Networks (MS&amp;N) tools and capabilities responsive to BMDO requirements. This project provides for the planning, coordination, program management, and technical oversight of system level M&amp;S for the Joint Theater Air and Missile Defense (JTAMD) and the National Missile Defense (NMD) Deployment Readiness Programs. This cost effective approach reduces the high cost of missile test programs and generates the information needed to make timely and informed operational, requirements, performance, design/cost/risk tradeoffs, mitigation and resource allocation decisions.</p> <p>MS&amp;N programs funded by this project include: Wargame 2000, M&amp;S Roadmap/Strategic Plan, Mission Oriented Information Technology Resources (ITR), BMDO Data Centers, BMD Virtual Data Center (VDC), the BMD Simulation Support Center (BMD SSC), and the infrastructure portion of the Advanced Research Center/Simulation Center (ARC/SC) and the Joint Missile Defense Network (JMDN) that supports the capability to interoperate in a distributed interactive simulation (DIS) environment.</p> <p>Wargame 2000 is being developed as a simulation to run wargames and exercises at the JNTF for the next 10 years. The requirements are to: design the simulation using object oriented paradigm, enable "plug and play" of TMD and NMD models, facilitate integrating BMDO's JNTF internal and external elements into a flexible real-time simulation suite, incorporate more realistic C2 displays, enhance wargaming productivity and responsiveness, and provide for multi-level security.</p> <p>The purpose of the BMDO Data Centers Program is to archive, manage, develop data products, distribute and provide remote access to all relevant BMD data from large volumes of science and technical data/information from experiments, tests, demonstrations, wargaming, simulations, model executions, joint effective analysis, and evaluations. Operation and management of the Data Center activities are accomplished at four sites: Advanced Missile Signature Center (AMSC), Arnold Engineering and Development Center (AEDC), Arnold Air Force Base, Tullahoma, TN; Backgrounds Center of Expertise (BCoE), Naval Research Laboratory (NRL), Washington, DC; Missile Defense Data Center (MDDC), Space and Missile Defense Command (SMDC), Huntsville, AL; and the BMD SSC, Joint National Test Facility (JNTF), Schriever AFB, CO. Each BMDO funded Data Center activity specializes in a particular discipline and is co-located with an existing DoD center of expertise .</p> <p>In addition to the BMD Data Center functions, the BMD SSC will archive M&amp;S tools which are joint, global and with multi-level fidelity to seamlessly link with existing and planned simulations or C4I networks, platforms and weapon systems, with little or no apparent differences between simulation and reality. This activity</p>										
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<p>will also include the development of a centralized M&amp;S catalogue of data bases to identify current and under-development BMDO simulation tools and retain the BMDO assessment capability with support from the Services.</p> <p>This project also provides acquisition and support services for the design, development, modernization, and control of BMDO Mission Oriented ITR. The objective for this program is to provide responsive ITR support and services via a flexible, responsive architecture to satisfy validated current and projected user ITR requirements. Projects to be supported via these tasks include all BMD mission oriented ITR activities. Specific tasks include documenting the Joint Missile Defense Network (JMDN) baseline, development of a Mission Oriented ITR Integrated Database (MIID) that captures user requirements, processing of Mission Oriented ITR-related service requests, establishing the Mission Oriented ITR Working Group, and the identification and support of High Performance Computing requirements.</p> <p>M&amp;S activities also funded by this project include: development, enhancement, and maintenance of the theater test beds and conduct of wargames that provide the analysis, integration, demonstration, and performance verification for TMD systems. It ensures joint usage of simulation tool resources and supports allied and friendly international participation and cooperation in wargaming exercises. This project focuses M&amp;S support in four primary areas: assessments, development/modification, computer architectures/networks, and program management for BMDO and Service M&amp;S programs.</p> <p>This project is in accordance with DoDD 5000.59, DoD Modeling and Simulation (M&amp;S) Management.</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>•</li> </ul> <p>Total                      0</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>•                      11577    Provide high performance computing resources at the ARC/SC to operate a multiple experiment test bed environment for conducting research and development activities for the Army's Ground Based Elements including the Extended Air Defense Test Bed (EADTB), Extended Air Defense Simulation, the Theater High Altitude Area Defense System (THAAD) Test Bed, and the Integrated System Test Capability. The ARC also supports development of the Ground –Based Radar (GBR), Integrated System Test Capability (ISTC), and NMD Joint Program Office Support. Major areas of support include maintenance, modification, and enhancements of/to: Computational Fluid Dynamics (CFD) analysis; COEA of TMD systems; technical base analysis; concept studies; and alternative trade-off analysis.</li> <li>•                      2495    Provide Army project personnel and support funding for the ARC/SC and EADTB.</li> <li>•                      4452    Provide BMDO M&amp;S support in four primary areas: assessments, development/modification, computer architecture/networks, and program management for BMDO and Service M&amp;S programs. This area also includes funding for Service M&amp;S activities. Top priorities include: the BMDO M&amp;S Strategic Plan and Roadmap; Wargame 2000; BMD SSC; Simulation Tool Working Group (STWG) management; execution of STWG action plans; and model assessments/evaluations.</li> </ul>		
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BMDO RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		DATE
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PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>		PROJECT <b>3352</b>
<ul style="list-style-type: none"> <li>5371 Continue to support BMDO's Mission Oriented ITR. Priorities include: continued modernization of BMDO's computer capabilities based on supporting BMD program priorities; continued upgrading of supercomputers to support modeling and simulations; implementation of new technology to support multimedia applications; replacement of obsolete computational resources; complete the Mission Oriented portion of the Five Year Information Resources Management Plan (FYIRMP); and execute transition of the Mission Oriented ITR Integrated Database (MIID) to the government.</li> <li>12509 Provide JNTF Project funding to support continued development of Wargame 2000 and BMD SSC. The Wargame 2000 program will continue to design and develop a "world-class" simulation tool for use in support of CinC wargames and exercises testing operational concepts involving Theater Air and National Missile Defense. Funding will support an NMD Initial Operational Capability (IOC), Block 10 Demo, integration with BMC3, initial TMD capability development and a NMD C2SIM 99 with Block 20. The BMD SSC will continue support to TMD and NMD in the following areas: assist in software development process improvement for M&amp;S, develop processes for testing and improving models and algorithms, incorporate new WEB technologies into the BMD SSC, and update the TMD, NMD and Building Block M&amp;S catalogs/repositories. Provide on-line query capabilities using BMDO Core M&amp;S and interconnect with Defense Modeling and Simulation Office (DMSO) Modeling and Simulation Resource Repository (MSRR) as an official DoD Node.</li> <li>11517 Provide funding to the BMDO Data Centers Program to archive, manage, develop data products, distribute and provide remote access to all relevant BMD data. Specific priorities include: AMSC - provides NMD Family of Systems (FoS), Cruise Missile Defense, Boost Phase Interceptor, and Midcourse Space Experiment (MSX) programs data management support, and develop and implement VDC; BCoE - provides NTW and Navy Area Joint Forces interoperability and integration, program data management support; the BCoE also provides the primary development effort for the VDC. MDDC - provides TAMD and NMD FoS, NMD Ground Based Interceptor (GBI), Ground Based Sensors (GBS) and others data management support, and develop and implement VDC; BMD SSC - provides Optic Cobra, TMDSE, System Integrated Test (SIT) -98, SIT-99, Wargame 2000, EADTB, NMD Data management support, and develops and implements the VDC network.</li> <li>420 OSD Reserves</li> </ul>	<p>Total 48341</p> <p><b>FY 2000 Planned Program:</b></p> <ul style="list-style-type: none"> <li>12000 Provide high performance computing resources at the ARC/SC to operate a multiple experiment test bed environment for conducting research and development activities for the Army's Ground Based Elements including the Extended Air Defense Test Bed (EADTB), Extended Air Defense Simulation, the Theater High Altitude Area Defense System (THAAD) Test Bed, and the Integrated System Test Capability. The ARC also supports development of the Ground -Based Radar (GBR), Integrated System Test Capability (ISTC), and NMD Joint Program Office Support. Major areas of support include maintenance, modification, and enhancements of/to: Computational Fluid Dynamics (CFD) analysis; COEA of TMD systems; technical base analysis; concept studies; and alternative trade-off analysis.</li> <li>2640 Provide funding for Army salaries in support of the ARC/SC and EADTB.</li> <li>2878 Provide BMDO M&amp;S support in four primary areas: assessments, development/modification, computer architecture/networks, and program management for BMDO and Service M&amp;S programs. This area also includes funding for Service M&amp;S activities. Top priorities include: the BMDO M&amp;S Strategic Plan and Roadmap; Wargame 2000; BMD SSC; Simulation Tool Working Group (STWG) management; execution of STWG action plans; and model assessments/evaluations.</li> </ul>	
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<ul style="list-style-type: none"> <li>1941 Continue to support BMDO's Mission Oriented ITR. Priorities include: continued modernization of BMDO's computer capabilities based on supporting BMD program priorities; continued upgrading of supercomputers to support modeling and simulations; implementation of new technology to support multimedia applications; replacement of obsolete computational resources; and continue to expand Mission Oriented ITR data collections to include all Mission Oriented programs.</li> <li>9891 Provide JNTF Project funding to support continued development of Wargame 2000. The Wargame 2000 program will continue to design and develop a "world-class" simulation tool for use in support of CINC wargames and exercises testing operational concepts involving Theater Air and National Missile Defense. Funding will involve development to support a Wargame 2000 Theater Air and Missile Defense (TAMD) demonstration exercise and a NMD Follow-on capability (FOC). Continue to incorporate new WEB technology into the BMD SSC, as well as continue the population and refinement of M&amp;S catalogs/repositories. Continue to refine and update on-line query capabilities of both unclassified and classified information. Assist and improve DoD support to the DMSO MSRR.</li> </ul>		
Total	29350	
<b>FY 2001 Planned Program:</b>		
<ul style="list-style-type: none"> <li>12000 Provide high performance computing resources at the ARC/SC to operate a multiple experiment test bed environment for conducting research and development activities for the Army's Ground Based Elements including the Extended Air Defense Test Bed (EADTB), Extended Air Defense Simulation, the Theater High Altitude Area Defense System (THAAD) Test Bed, and the Integrated System Test Capability. The ARC also supports development of the Ground -Based Radar (GBR), Integrated System Test Capability (ISTC), and NMD Joint Program Office Support. Major areas of support include maintenance, modification, and enhancements of/to: Computational Fluid Dynamics (CFD) analysis; COEA of TMD systems; technical base analysis; concept studies; and alternative trade-off analysis.</li> <li>2754 Provide funding for Army salaries in support of the ARC/SC and EADTB.</li> <li>2896 Provide BMDO M&amp;S support in four primary areas: assessments, development/modification, computer architecture/networks, and program management for BMDO and Service M&amp;S programs. This area also includes funding for Service M&amp;S activities. Top priorities include: the BMDO M&amp;S Strategic Plan and Roadmap; Wargame 2000; BMD SSC; Simulation Tool Working Group (STWG) management; execution of STWG action plans; and model assessments/evaluations.</li> <li>3545 Continue to support BMDO's Mission Oriented ITR. Priorities include: continued modernization of BMDO's computer capabilities based on supporting BMD program priorities; continued upgrading of supercomputers to support modeling and simulations; implementation of new technology to support multimedia applications; replacement of obsolete computational resources; and continue to expand Mission Oriented ITR data collections to include all Mission Oriented programs.</li> </ul>		
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BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>3352</b>																																																																																									
<ul style="list-style-type: none"> <li>• 8111 Provide JNTF Project funding to support continued development of Wargame 2000. The Wargame 2000 program will continue to design and develop a “world-class” simulation tool for use in support of CINC wargames and exercises testing operational concepts involving Theater Air and National Missile Defense. Continue to incorporate new WEB technology into the BMD SSC, as well as continue the population and refinement of M&amp;S catalogs/repositories. Continue to refine and update on-line query capabilities of both unclassified and classified information. Assist and improve DoD support to the DMSO MSRR.</li> </ul> <p>Total        29306</p>																																																																																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 5px;"><b>B. Other Program Funding Summary</b></th> <th style="text-align: center; padding: 5px;"><u>FY 1998</u></th> <th style="text-align: center; padding: 5px;"><u>FY 1999</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2000</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2001</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2002</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2003</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2004</u></th> <th style="text-align: center; padding: 5px;"><u>FY 2005</u></th> <th style="text-align: center; padding: 5px;">To <u>Compl</u></th> <th style="text-align: center; padding: 5px;">Total <u>Cost</u></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">2400 NMD Program, PE 0603871C</td> <td style="text-align: center; padding: 5px;">8099</td> <td style="text-align: center; padding: 5px;">700</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">TBD</td> <td style="text-align: center; padding: 5px;">TBD</td> </tr> <tr> <td style="padding: 5px;">3352 Support Technologies - ATD, PE 0603173C</td> <td style="text-align: center; padding: 5px;">5015</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">TBD</td> <td style="text-align: center; padding: 5px;">TBD</td> </tr> <tr> <td style="padding: 5px;">3352 Joint TMD, PE 0603172C</td> <td style="text-align: center; padding: 5px;">62965</td> <td style="text-align: center; padding: 5px;">16648</td> <td style="text-align: center; padding: 5px;">11268</td> <td style="text-align: center; padding: 5px;">11592</td> <td style="text-align: center; padding: 5px;">11497</td> <td style="text-align: center; padding: 5px;">11465</td> <td style="text-align: center; padding: 5px;">9796</td> <td style="text-align: center; padding: 5px;">9955</td> <td style="text-align: center; padding: 5px;">TBD</td> <td style="text-align: center; padding: 5px;">TBD</td> </tr> <tr> <td style="padding: 5px;">3353 Technical Operations, PE 0603874C</td> <td style="text-align: center; padding: 5px;"></td> <td style="text-align: center; padding: 5px;"></td> <td style="text-align: center; padding: 5px;">7687</td> <td style="text-align: center; padding: 5px;">7286</td> <td style="text-align: center; padding: 5px;">5765</td> <td style="text-align: center; padding: 5px;">5749</td> <td style="text-align: center; padding: 5px;">5867</td> <td style="text-align: center; padding: 5px;">5986</td> <td style="text-align: center; padding: 5px;">TBD</td> <td style="text-align: center; padding: 5px;">TBD</td> </tr> </tbody> </table>										<b>B. Other Program Funding Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>	2400 NMD Program, PE 0603871C	8099	700	0	0	0	0	0	0	TBD	TBD	3352 Support Technologies - ATD, PE 0603173C	5015	0	0	0	0	0	0	0	TBD	TBD	3352 Joint TMD, PE 0603172C	62965	16648	11268	11592	11497	11465	9796	9955	TBD	TBD	3353 Technical Operations, PE 0603874C			7687	7286	5765	5749	5867	5986	TBD	TBD																																	
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<p><b>C. Acquisition Strategy:</b> The work in this project is sourced through full and open competition. Primary M&amp;S support is performed at the JNTF, ARC/SC, MDDC, AMSC, BDC, BMD SSC and other test bed facilities. The ARC/SC contractor is a Cost Plus Fixed Fee (CPFF) first awarded in June of 1989.</p>																																																																																																	
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BMDO RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							DATE
BUDGET ACTIVITY							PROJECT
<b>4 - Demonstration and Validation</b>							<b>February 1999</b>
PE NUMBER AND TITLE							PROJECT
<b>0603874C BMD Technical Operations</b>							<b>3352</b>
Delivery of FY 00 M&S Roadmap	2Q						
VDC FOC System Test		2Q					
EADTB V&V Baseline	3Q						
Wargame 2000 Integration with BMC3	3Q						
Complete Interim Development of Mission Oriented ITR Integrated Database	4Q						
M-O FYIRMP	3Q						
MIID Transition	3Q						
BMD SSC Version Release 6.0	4Q						
99A C2SIM with Wargame 2000	4Q						
Wargame 2000 TAMD IOC		4Q					
Wargame 2000 Follow-on Cap (FOC)		4Q					
BMDSSC Data Center FOC	4Q						
Cost Model Implementation w/in DC	4Q						
Transition VDC Operation to BMD SSC		2Q					
Wargame 2000 TAMD FOC			4Q				
Publish JMDN Architecture Description	4Q						
Project 3352							Exhibit R-2A (PE 0603874C)

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<b>BMDO RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3352</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. ARC Infrastructure	SS/CPFF	Colsa Corporation (HSV)		8683	10/95	9000		9000		TBD	26683	
b. Simulation Center Infrastructure	C/CPFF	Madison Research (HSV)		2894	10/95	3000		3000		TBD	8894	
c. WG2K Software Dvlpmnt, Rqmt Analysis, System Engineering and design test	C/CPAF	TRW (JNTF)		12509	2/99	9891		8111		TBD	30511	
d. Services M&S				1476		0		0		TBD	1476	
e. ROW and Radar Analysis Tools (MDDC)	CPAF	XonTech (HSV)		600	8/98	0		0		TBD	600	
f. MDDC Development	CPAF	TBD		2305	TBD	0		0		TBD	2305	
g. AMSC Development	CPAF	Sverdrup (TN)		2270	10/96	0		0		TBD	2270	
h. Backgrounds Data Center of Expertise	CPFF	Raytheon		1888	2/93	0		0		TBD	1888	
i. Virtual Data Center/BMDSSC	CPAF	TRW (JNTF)		2258	11/94	0		0		TBD	2258	
j. BMDO Data Centers				2196		0		0		TBD	2196	
k. Mission Oriented ITR				5371	10/95	1941		3545		TBD	10857	
Subtotal Product Development:				42450		23832		23656			89938	
Remark:												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Project 3352												
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Exhibit R-3 (PE 0603874C)												

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<b>BMDO RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3352</b>		
Subtotal Support Costs:												
Remark:												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Subtotal Test and Evaluation:												
Remark:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Army Salaries		Huntsville		2495		2640		2754		TBD	7889	
b. BMDO M&S Management				2976		2878		2896		TBD	8750	
c. OSD Reserves				420							420	
d.												
e.												
f.												
Subtotal Management Services:					5891		5518		5650		17059	
Remark:												
Project Total Cost:					48341		29350		29306		106997	
Remark:												
Project 3352												

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>3353</b>		
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
3353 JNTF *	0	51815	56088	55037	60027	58354	59104	60514	Continuing	Continuing
<p>* The funding in this project for FY99-03 was transferred from PEs 0603871C and 0603872C. See those R2s for FY96-98 funding.</p> <p><b>A. <u>Mission Description and Budget Item Justification</u></b></p> <p>This project provides core funding for the Joint National Test Facility (JNTF) for the Ballistic Missile Defense Organization's (BMDO) joint missile defense modeling, simulation, and test center of excellence whose focus is the joint inter-service, interoperability, and integration aspects of missile defense system acquisition. It is staffed by all of the Services. The JNTF is the BMDO's level playing field for the resolution of missile defense issues which cut across Service interfaces. The JNTF conducts human-in-the-loop missile defense wargaming for concept of operations (CONOPS) exploration and development. The JNTF also provides simulation, communication connectivity and other JNTF assets in support of BMDO- and CINC-sponsored theater missile defense exercises. The JNTF is the site at which increments of the National Missile Defense (NMD) Battle Management/Command, Control, and Communications (BMC3) capability are hosted. Test planning, implementation and analysis for both NMD and Theater Missile Defense (TMD) are conducted at the JNTF. Ballistic Missile Defense (BMD) system-level analysis of missile defense issues are conducted here. The JNTF also performs studies and analysis in support of joint missile defense and provides inter-service computational capabilities and wide area network communication networks with Service facilities. The BMDO Data Centers program will be transferred from project 3352 (Modeling, Simulation, and Networks) beginning FY 2000.</p> <p><b>FY 1998 Accomplishments:</b>            Total            0    The funding for this project was in PEs 0603871C and 0603872C in FY 1998.</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>•            32634    Provide operations support of network, computer hardware, software, and communication procurement, installation, and maintenance, leased communication lines, systems engineering, security (both personnel and equipment), facility maintenance, government civilian pay, advisory and assistance service to the government, and contractor management services essential to missile defense acquisition.</li> <li>•            6322        Modernize and upgrade information resource technology base to maintain the JNTF as a state-of-the-art facility to support joint modeling and simulation, and distributed testing. Provide software process improvement for modeling and simulation, develop processes for testing and improving models and algorithms. Implement facility modernization to support the technology base.</li> </ul>										
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BMDO RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		DATE February 1999
BUDGET ACTIVITY 4 - Demonstration and Validation	PE NUMBER AND TITLE 0603874C BMD Technical Operations	PROJECT 3353
<ul style="list-style-type: none"> <li>12859 Provide a core capability of technical expertise that makes the JNTF the center of excellence in missile defense acquisition support and allows for fast response on new tasking. Provide analysis expertise to address BMD issues across the entire development and operational spectrum. Provide command and control simulations for TMD and NMD for joint CONOPS development, and missile defense system simulations to CINC exercises. Incorporate new WEB technologies into the BMD Simulation Support Center, and update the TMD, NMD, and building block M&amp;S catalogs/repositories. Provide a missile defense data repository that will archive, manage, develop, distribute, and provide remote access to all relevant BMD test, experiment, M&amp;S, and wargame data.</li> </ul>		
Total	51815	
<b>FY 2000 Planned Program:</b>		
<ul style="list-style-type: none"> <li>32478 Provide operations support of network, computer hardware, software, and communication procurement, installation, and maintenance, leased communication lines, systems engineering, security (both personnel and equipment), facility maintenance, government civilian pay, advisory and assistance service to the government, and contractor management services essential to missile defense acquisition.</li> <li>4791 Modernize and upgrade information resource technology base to maintain the JNTF as a state-of-the-art facility to support joint modeling and simulation, and distributed testing. Provide software process improvement for modeling and simulation, develop processes for testing and improving models and algorithms. Implement facility modernization to support the technology base.</li> <li>18819 Provide a core capability of technical expertise that makes the JNTF a center of excellence in missile defense acquisition support and allows for fast response on new tasking. Provide analysis expertise to address BMD issues across the entire development and operational spectrum. Provide command and control simulations for TMD and NMD for joint CONOPS development, and missile defense system simulations to CINC exercises. Incorporate new WEB technologies into the BMD Simulation Support Center, and update the TMD, NMD, and building block M&amp;S catalogs/repositories. Provide a missile defense data repository that will archive, manage, develop, distribute, and provide remote access to all relevant BMD test, experiment, M&amp;S, and wargame data.</li> </ul>		
Total	56088	
<b>FY 2001 Planned Program:</b>		
<ul style="list-style-type: none"> <li>32083 Provide operations support of network, computer hardware, software, and communication procurement, installation, and maintenance, leased communication lines, systems engineering, security (both personnel and equipment), facility maintenance, government civilian pay, advisory and assistance service to the government, and contractor management services essential to missile defense acquisition.</li> <li>4725 Modernize and upgrade information resource technology base to maintain the JNTF as a state-of-the-art facility to support joint modeling and simulation, and distributed testing. Provide software process improvement for modeling and simulation, develop processes for testing and improving models and algorithms. Implement facility modernization to support the technology base.</li> </ul>		
Project 3353		

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>			
<b>BUDGET ACTIVITY</b> <b>4 - Demonstration and Validation</b>				<b>PE NUMBER AND TITLE</b> <b>0603874C BMD Technical Operations</b>				<b>PROJECT</b> <b>3353</b>			
<ul style="list-style-type: none"> <li>18229 Provide a core capability of technical expertise that makes the JNTF center of excellence in missile defense acquisition support and allows for fast response on new tasking. Provide analyses expertise to address BMD issues across the entire development and operational spectrum. Provide command and control simulations for TMD and NMD for joint CONOPS development, and missile defense system simulations to CINC exercises. Incorporate new WEB technologies into the BMD Simulation Support Center, and update the TMD, NMD, and building block M&amp;S catalogs/repositories. Provide a missile defense data repository that will archive, manage, develop, distribute, and provide remote access to all relevant BMD test, experiment, M&amp;S, and wargame data.</li> </ul> <p>Total      55037</p>											
<b>B. Other Program Funding Summary</b>		<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
3352 Modelling & Simulation, PE 0603871C		2299									
3352 Modelling & Simulation, PE 0603872C		7912									
3352 Modelling & Simulation, PE 0603173C		4412									
3352 Modelling & Simulation, PE 0603174C			11517								
3353 Joint National Test Facility, PE 0603871C		8814									
3353 Joint National Test Facility, PE 0603872C		38956									
<p><b>C. Acquisition Strategy:</b> The tasks in this project are met through full and open competition. The JNTF support contracts were awarded to Lockheed Martin, (Operations &amp; Maintenance) and TRW (Research &amp; Development), both contracts are Cost Plus Award Fee. Contract Advisory &amp; Assistance Services are provided by Vanguard Research as Cost Plus Award Fee. In February 1999, the OMC and RDC will be combined and referred to as the CRDC (Combined Research &amp; Development Contract) with TRW being the prime contractor and Lockheed-Martin a subcontractor to TRW.</p>											
<b>D. Schedule Profile</b>		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>			
NMD JTA Support		1Q									
TMD JTA Support		1Q									
Annual BMD JTA Compliance Report		1Q	1Q	1Q	1Q	1Q	1Q	1Q			
TAMD Wargame		4Q	4Q	4Q	4Q	4Q	4Q	4Q			
C2 Simulation (NMD)		3Q	3Q	3Q	3Q	3Q	3Q	3Q			
C2 Simulation Exercise		3Q									
Attack Operations Campaign Analysis Report		3Q									
JTA Annual Report Annex		4Q	4Q	4Q	4Q	4Q	4Q	4Q			
JNTF Contract Consolidation		2Q									
Upgrade Wargame 2000 Equipment		4Q									
<div style="display: flex; justify-content: space-between; margin-top: 20px;"> <span>Project 3353</span> <span>Page 24 of 39 Pages</span> <span>Exhibit R-2A (PE 0603874C)</span> </div>											

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<b>BMDO RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3353</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Subtotal Product Development:												
Remark:												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Lockheed-Martin	C/CPAF	JNTF	0	32759	FY95	36868	FY99	36060	FY99	TBD	105687	
b. TRW	C/CPAF	JNTF	0	8299	FY95	9152	FY99	8952	FY99	TBD	26403	
c. Vanguard Research	C/CPAF	JNTF	0	4557	FY95	4664	FY95	4508	FY00	TBD	13729	
d. JNTF	Government	JNTF	0	4418	N/A	3802	N/A	3904	N/A	TBD	12124	
a. USN NRL	Government	JNTF	0	866	N/A	809	N/A	805	N/A	TBD	2480	
a. MITRE	FFRDC	JNTF	0	916	N/A	793	N/A	808	N/A	TBD	2517	
Subtotal Support Costs:				51815		56088		55037			162940	
Remark:												
<p>The JNTF provides missile defense-related analysis, system level engineering, integration, and test and evaluation; supports the development of joint and combined missile defense doctrine, requirements, and CONOPS; and supports warfighting CINCs by conducting joint and combined simulations and wargames and participating in exercises. It accomplishes this mission by hosting BMDO projects, and non-BMDO customers that have synergy with missile defense, with space occupancy (facility O&amp;M, security, utilities, transportation and handling, etc.), computers (O&amp;M, networking, supplies and materials, customer service, licensing, installation, etc.), communications, modernization of computer equipment and software, facility modifications and enhancements, and product engineering support.</p> <p>Activities for this project are divided into Capability, Modernization, and Operations Support. Capability provides the JNTF with a core cadre of experienced personnel to maintain technical expertise in support of current JNTF responsibilities and to analyze the implications of additional or revised tasking. Modernization provides essential improvement of JNTF computers, communications, and facilities in support of resident and nonresident missions. Operations Support includes operations and maintenance of</p>												
<div style="display: flex; justify-content: space-between;"> <span>Project 3353</span> <span>Page 25 of 39 Pages</span> <span>Exhibit R-3 (PE 0603874C)</span> </div>												

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BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3353</b>		
the facilities, computer hardware and software, communications, networks, system engineering, security, and other capabilities essential to common system support of the missions assigned by the BMDO; it is funded by BMDO and some reimbursement from tenants. Reimbursement is obtained by charging fee-for-service rates for operational space occupancy (based on square footage) and computer O&M (based on workstation count).												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Subtotal Test and Evaluation:												
Remark:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a.												
b.												
c.												
d.												
e.												
f.												
Subtotal Management Services:												
Remark:												
Project Total Cost:				51815		56088		55037			162940	
Remark:												
Project 3353												

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BMDO RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3354</b>	
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
3354 Targets ***	0	1952	2320	0	0	0	0	0	Continuing	Continuing
<p>*** The funding in this project for FY99-03 was transferred from PE 0603872C. See that R-2 for FY98 funding.</p> <p><b>A. <u>Mission Description and Budget Item Justification</u></b></p> <p>This project maintains the Strategic Target System (STARS) motors, components and launch equipment and mission planning support for possible future use as a Theater Missile Defense (TMD) long range target or National Missile Defense (NMD) target.</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• Total 0</li> </ul> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 1952 These funds will be used to continue support of STARS target program.</li> </ul> <p>Total 1952</p> <p><b>FY 2000 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 2320 These funds will be used to continue support of STARS target program. Without an additional outyear funding, these funds will be used to complete the destruction of the remaining STARS motors.</li> </ul> <p>Total 2320</p> <p><b>FY 2001 Planned Program:</b></p> <p>Total 0</p>										
<b>B. <u>Other Program Funding Summary</u></b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>
3354 TARGETS, PE 0603872C	69453	17866	41966	40133	40135	40028	34224	34778	Continuing	Continuing
2400 NMD, PE 0603871C	837843	1501743	809275	838204	725657	623600	604567	456874	Continuing	Continuing
3360 TEST RESOURCES, PE 0603874C	0	41410	51909	23759	25003	24150	24267	24756	Continuing	Continuing
<div style="display: flex; justify-content: space-between; padding: 10px;"> <span>Project 3354</span> <span>Page 27 of 39 Pages</span> <span>Exhibit R-2A (PE 0603874C)</span> </div>										

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>							DATE <b>February 1999</b>																																			
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>3354</b>																																		
<p><b>C. C. <u>Acquisition Strategy:</u></b>          The U.S. Army Space and Missile Command (USASMDC) will maintain STARS at a sustainment level to keep the knowledge base and components necessary to launch a STARS target in the future.</p>																																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b><u>D. Schedule Profile</u></b></td> <td style="width: 5%;"><u>FY 1996</u></td> <td style="width: 5%;"><u>FY 1997</u></td> <td style="width: 5%;"><u>FY 1998</u></td> <td style="width: 5%;"><u>FY 1999</u></td> <td style="width: 5%;"><u>FY 2000</u></td> <td style="width: 5%;"><u>FY 2001</u></td> <td style="width: 5%;"><u>FY 2002</u></td> <td style="width: 5%;"><u>FY 2003</u></td> <td style="width: 5%;"><u>FY 2004</u></td> <td style="width: 5%;"><u>FY 2005</u></td> </tr> <tr> <td>SBIRS LOW – SDT-1</td> <td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>SBIRS LOW – SDT-2</td> <td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										<b><u>D. Schedule Profile</u></b>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	SBIRS LOW – SDT-1					X						SBIRS LOW – SDT-2					X					
<b><u>D. Schedule Profile</u></b>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>																																
SBIRS LOW – SDT-1					X																																					
SBIRS LOW – SDT-2					X																																					
Project 3354			Page 28 of 39 Pages			Exhibit R-2A (PE 0603874C)																																				

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BMDO RDT&E COST ANALYSIS (R-3)										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3354</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal Product Development:												
Remark:												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal Support Costs:												
Remark:												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal Test and Evaluation:												
Remark:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Maintenance of System	Allot	USASMDC, Huntsville, AL		1952	10/01/98	2320	10/01/99			TBD	4272	N/A
Subtotal Management Services:				1952		2320					4272	
Remark:												
Project Total Cost:				1952		2320					4272	
Remark:												
Project 3354												

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>				PROJECT <b>3360</b>		
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
3360 Test Resources	0	41428	51909	23759	25003	24150	24267	24756	Continuing	Continuing
<p>* FY98 funding can be found in PE 0603872C, Joint TMD - DEM/VAL and PE 0603871C, NMD.</p> <p><b>A. <u>Mission Description and Budget Item Justification</u></b></p> <p>This project provides for BMDO planning, oversight and coordination of integrated test and evaluation facilities. The project includes inter-element as well as inter-service test and evaluation efforts, and provides for common ground test facilities, ranges and instrumentation. Project 3360 funds those test resources mutually supporting BMDO's National Missile Defense (NMD), Theater Missile Defense (TMD) and Technology programs. Individual BMDO programs pay only the direct costs associated with their specific testing efforts at these mission critical facilities.</p> <p>The Technical Operations ground test facilities include:</p> <ul style="list-style-type: none"> <li>Kinetic Kill Vehicle Hardware in the Loop Simulator (KHILS) at Eglin AFB in Fort Walton Beach, FL</li> <li>Infrared and Blackbody Standards at the National Institute of Standards and Technology (NIST) in Gaithersburg, MD.</li> <li>Hypervelocity Ballistic Range G Light Gas Gun at the Arnold Engineering and Development Center (AEDC) in Tullahoma, TN</li> <li>7V and 10V Space Chambers at AEDC, Tullahoma, TN</li> <li>Center for Research Support (CERES) at the Joint National Facility (JNTF), Schriever AFB, CO</li> <li>Holloman High Speed Test Track (HHSTT) at Holloman AFB, NM</li> <li>AEDC Hypervelocity Wind Tunnel Number 9 (Tunnel 9) at White Oak, MD</li> <li>Portable Optical Sensor Testbed (POST) at Anahiem, CA</li> <li>National Hover Test Facility (NHTF) located at Edwards AFB, CA</li> </ul> <p>The Technical Operations test range facilities include national ranges such as:</p> <ul style="list-style-type: none"> <li>White Sands Missile Range (WSMR) in Las Cruces, NM including Ft. Wingate Launch Complex near Gallup, NM</li> <li>Kwajalein Missile Range (KMR) in the central Pacific Ocean</li> <li>Pacific Missile Range Facility (PMRF) and Kauai Test Facility (KTF) at Kauai, HI</li> </ul> <p>The range instrumentation special test equipment, data collection assets, and range instrumentation include:</p> <ul style="list-style-type: none"> <li>Airborne Surveillance Testbed (AST) target signature collection sensor and platform (previously managed within project 1155).</li> <li>High Altitude Optical Imaging System (HAOIS) based at White Sands Missile Range, Las Cruces, NM.</li> <li>Mobile Range Safety System and Kwajalein Range Safety Control System Upgrades</li> <li>NP-3 Aircraft upgrade for remote area safety support.</li> </ul>										
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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>		DATE <b>February 1999</b>
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>	PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>	PROJECT <b>3360</b>
<p>Sea-Lite Beam Director (SLBD), based at White Sands Missile Range, Las Cruces, NM Miscellaneous improvements to BMDO infrastructure and support systems</p> <p>These ground test, range and instrumentation assets provide valuable risk reduction and test implementation capability in support of TMD and NMD test and evaluation. The ground test facilities provide a cost-effective method of testing and evaluating applicable component, sub-system and system level technologies. The common range facilities provide a cost-effective method of flight testing missile and target components applicable to the BMD program and TMD Family of Systems (FoS), BMC<sup>3</sup> and interoperability testing. The range instrumentation provides a cost-effective capability to collect target signature characteristics, phenomenology data, and target/interceptor diagnostics on flight tests. It also provides for the living quarters for personnel support test programs at USAKA. These facilities and capabilities support systems design, verification and validation of target realism, and the evaluation of test results.</p> <p>Starting in FY00, this program element and project also provide environmental program guidance, environmental impact analyses and documentation, real property facility siting, acquisition, and facility operational support for the Ballistic Missile Defense Organization (BMDO) Theater Missile Defense (TMD) system. Plans, programs, budgets, and oversees facility acquisition through the Military Construction (MILCON) and RDT&amp;E construction programs. Provides guidance and supports BMDO TMD Environmental Safety and Health (ESH) Program which includes the Environmental Assessment and Environmental Impact Statement process, environmental compliance, pollution prevention, and other environmental efforts for TMD activities. (For FY99, these environmental, siting and facility support activities are funded in this project under PE 0603872C, Joint TMD - DEM/VAL. For FY98 and prior, these activities were managed through project 3157 within the Joint TMD PE.)</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• See R-2A Exhibit for PE 0603872C, Joint TMD - DEM/VAL, Projects 3157 and 3360.</li> </ul> <p>Total                    0</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>•                    7449 Provides ground test facility infrastructure and upgrades for BMDO testing including: wind tunnel testing at Tunnel 9 to support NMD, TMD and AIT; sensor testing at AEDC 7V/10V; lethality testing at AEDC Range G; upgrades at KHILS to support TMD, AIT and NMD interceptor kill vehicle testing, and primary IR standards, black body and optical materials, calibrations at the NIST to support other BMDO facilities. Support THAAD flight test anomaly investigation and objective window testing at Tunnel 9. Provide orbital experiment and satellite operations support at CERES.</li> <li>•                    10922 Provides for operation and maintenance at Meck Island, core support of the Kwajelein Missile Range Safety System (KMRSS), improvement and modernization of Range Control Safety System (RCSS), technical support at Wake Island, and collection &amp; analysis of data by MIT/LL, as well as other related range support</li> <li>•                    5608 Provides for upgrades to NP-3 aircraft, launch support and instrumentation upgrades at White Sands Missile Range (WSMR), caretaker activities at Fort Wingate, as well as other general range support.</li> <li>•                    16013 Provides AST core-operating costs to collect optical data of NMD and TMD development flights, target development flights and flight test intercepts.</li> <li>•                    1436 Provides technical support for Resource activities by the Executing Agent and at BMDO.</li> </ul> <p>Total                    41428</p> <p>Project 3360</p>		

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<p><b>FY 2000 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 13462 Provides ground test facility infrastructure and upgrades for BMDO testing including: wind tunnel testing at Tunnel 9 and AOEC; sensor testing at AEDC 7V/10V; lethality testing at AEDC Range G; primary IR standards, black body and optical materials, calibrations at the NIST; integrated kill vehicle testing at NHTF; capability for sled track maintenance and upkeep at HHSTT; upgrades at KHILS to support TMD, AIT and NMD interceptor kill vehicle testing; and IR testing at the POST facility.</li> <li>• 4000 Provides for upgrades to NP-3 aircraft, launch support and instrumentation upgrades at White Sands Missile Range (WSMR), caretaker activities at Fort Wingate, as well as other general range support (A&amp;S/02)</li> <li>• 4782 Provides for launch site support at Kauai Test Facility (KTF), collection &amp; analysis of data by MIT/LL, as well as other related range support</li> <li>• 9340 Provide for operation and maintenance at Meck Island, core support of the Kwajalein missile Range Safety System (KMRSS), improvement and modernization of Range Control Safety System (RCSS), and technical support at Wake Island. (A/05)</li> <li>• 16700 Provides AST core-operating costs to collect optical data of NMD and TMD development flights, target development flights and flight test intercepts. Provides for costs to terminate the program by close of FY00, if necessary.</li> <li>• 991 Integrates ESH considerations into BMDO weapon systems acquisition life cycle; to reduce overall risk and costs, while enhancing the human environment and systems' performance. ESH analyses are accomplished in five (5) areas to integrate ESH issues into the systems engineering and other program planning processes. These areas are: 1) the National Environmental Policy Act (NEPA), 2) environmental compliance, 3) safety and occupational health, 4) hazardous materials management, and 5) pollution prevention. Work continues on environmental analyses of the Medium Extended Air Defense System (MEADS), and Advanced Interceptor Technology. Work also continues on new BMDO requirements as well as on Navy Area, Navy Theater Wide, THAAD and PAC-3 systems.</li> <li>• 1343 Ensures the FY99-01 MILCON, Minor MILCON, and RDT&amp;E design and construction activities are executed in time to support BMD programs' facility requirements and ensures compliance with all applicable laws and regulations. The design emphasis will be on completing design for the National Missile Defense (NMD) facility requirements in preparation for the Deployment Readiness Review and design for TMD systems. Provides for TMD and NMD test and evaluation facilities improvements to support increasingly complex test scenarios.</li> <li>• 1291 Provides technical support for Resource activities by the Executing Agent and at BMDO.</li> </ul> <p>Total 51909</p> <p><b>FY 2001 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 5896 Provide ground test facility infrastructure and upgrades for BMDO testing including: wind tunnel testing at Tunnel 9 and AOEC; sensor testing at AEDC 7V/10V; lethality testing at AEDC Range G; and primary IR standards, black body and optical materials, calibrations at the NIST. Provide orbital experiment and satellite operations support at CERES.</li> <li>• 10229 Provide for operation and maintenance at Meck Island, core support of the Kwajalein missile Range Safety System (KMRSS), improvement and modernization of Range Control Safety System (RCSS), technical support at Wake Island and collection and analysis of data by MIT/LL.</li> <li>• 3924 Provide for upgrades to NP-3 aircraft, launch support and instrumentation upgrades at White Sands Missile Range (WSMR), caretaker activities at Fort Wingate, as well as other general range support.</li> </ul>		
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<ul style="list-style-type: none"> <li>• 1024 Integrate ESH considerations into BMDO weapon systems acquisition life-cycle; to reduce overall risk and costs, while enhancing the human environment and systems' performance. ESH analyses are accomplished in five (5) areas to integrate ESH issues into the systems engineering and other program planning processes. These areas are: 1) the National Environmental Policy Act (NEPA), 2) environmental compliance, 3) safety and occupational health, 4) hazardous materials, and 5) pollution prevention. Work continues on new BMDO requirements as well as on Navy Area, Navy Theater Wide, MEADS, THAAD and PAC-3 systems to meet their requirements.</li> <li>• 1515 Ensures the FY99-01 MILCON, Minor MILCON, and RDT&amp;E design and construction activities are executed in time to support BMD programs' facility requirements and ensures compliance with all applicable laws and regulations. Supports the design and construction of facilities to test and field ballistic missile defense systems such as NMD, THAAD, PAC-3, Navy Area, and Navy Theater Wide.</li> <li>• 1171 Provide technical support for Resource activities by the Executing Agent and at BMDO.</li> </ul>																																																																																																																																																																																																																										
Total				23759																																																																																																																																																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><b>B. 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Cont.	3360 MILCON Planning & Design, PE 0603872C	0	331	0	0	0	0	0	0	Cont.	Cont.	3360 Minor MILCON, PE 0603874C	0	0	1248	294	1409	1409	2455	2478	Cont.	Cont.	3360 MILCON Planning & Design, PE 0603874C	0	0	124	29	140	141	550	550	Cont.	Cont.	2400 NMD, PE 0603871C	837843	1501743	809275	838204	725657	623600	604567	456874	Cont.	Cont.
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**BMDO RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**

DATE

**February 1999**

BUDGET ACTIVITY

**4 - Demonstration and Validation**

PE NUMBER AND TITLE

**0603874C BMD Technical Operations**

PROJECT

**3360**

In using ranges and test facilities and providing technical assistance of facilities, siting, and environmental activities, BMDO implements a Reliance process which:

- maintains perspective of national technical test capabilities relative to BMD
- responds to program requirements
- uses existing test resources where possible
- requires coordination prior to development of new resources
- and consolidates management of existing resources where possible and practicable.

This policy results in a variety of acquisition methods. Executing Agent Project Managers for the elements and tasks under this project include the three military services and the BMDO. Service Project Manager organizations specifically include the:

- U.S. Army Space and Missile Defense Command (USASMDC)
- U.S. Navy Office of Naval Research
- Navy Program Executive Officer (Theater Air Defense)
- U.S. Air Force Research Laboratory
- U.S. Army Corps of Engineers,
- and the U.S. Army Program Executive Officer-Missile Defense.

BMDO tasks the Services through Program Management Agreements to perform the required tasks in support of the BMD program and performs quarterly reviews to verify and validate completed tasks.

<b>D. Schedule Profile</b>	<b>FY 1998</b>				<b>FY 1999</b>				<b>FY 2000</b>				<b>FY 2001</b>				<b>FY 2002</b>				<b>FY 2003</b>				<b>FY 2004</b>				<b>FY 2005</b>			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
KHILS – AIT									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
KHILS – DITP (Quantum Well, Integration Tests)					X	X	X	X	X	X	X	X	X	X	X	X																
KHILS – DTRA (Nuclear Requirements)									X	X	X	X	X	X	X	X	X	X	X													
KHILS – THAAD (Seeker Entries, Target Modeling & Algorithm Support)					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X												
KHILS – BPI (System Studies)					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
KHILS – MEADS (HIL Testing)													X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
KHILS – Theater Wide SM 3 (HIL Testing)													X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
KHILS – GBI (KV Down Select, Flight Test Support)					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
KHILS – Target VV&A					X	X	X	X	X	X																						
7V/10V – GBI: BNA					X	X	X	X	X	X	X																					
7V/10V – GBI: Raytheon					X	X	X	X	X	X	X																					
Tunnel 9 – THAAD Support												X	X	X	X	X	X															

Project 3360

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Exhibit R-2A (PE 0603874C)

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<b>BMDO RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3360</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Army TMD Facility/ Environmental Programs Development	Allot	Army PEO, Huntsville	N/A	0		231	10/1/99	245	10/01/01	Cont.	476	N/A
b. Navy TMD Facility/ Environmental Programs Development	Allot	Navy PEO TAD, Arlington VA	N/A	0		99	10/1/99	103	10/01/01	Cont.	202	N/A
c. Air Force TMD Facility/Environmental Programs Development	Allot	AF SMC, Los Angeles CA	N/A	0		10	10/1/99	10	10/01/01	Cont.	20	N/A
d. Environmental, Safety & Health Initiatives	MIPR	TBD	N/A	0		18	TBD	149	TBD	Cont.	167	N/A
e. Army SMDC Fac/Envir Prog Development	Allot	Army SMDC, Huntsville, AL	N/A	0		200	10/1/99	204	10/01/01	Cont.	404	N/A
Subtotal Product Development:						558		711			1269	
Remark:												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Facility Acquisition Life-Cycle Management	MIPR	U.S. Army Corps of Engineers, Huntsville AL		0		103	10/1/99	106	10/1/00	Cont.	209	N/A
b. System Engineering and Technical Support (BMDO)	CPFF	SciComm, Inc Rosslyn, VA		0		1648	08/01/99	1697	8/01/00	Cont.	3345	N/A
c. Army PAX Support	MIPR	U.S. Army Corps of Engineering, Washington DC		0		25	TBD	25	TBD	Cont.	50	N/A
Subtotal Support Costs:				0		1776		1828			3604	
Remark:												
<div style="display: flex; justify-content: space-between;"> <span>Project 3360</span> <span>Page 36 of 39 Pages</span> <span>Exhibit R-3 (PE 0603874C)</span> </div>												

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<b>BMDO RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>3360</b>		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal Test and Evaluation:												
Remark:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	<u>FY 1999</u> Cost	<u>FY 1999</u> Award Date	<u>FY 2000</u> Cost	<u>FY 2000</u> Award Date	<u>FY 2001</u> Cost	<u>FY 2001</u> Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. AST Core Support	Allot	USASMDC		16013	10/01/98	16700	10/01/99	0	10/1/00	TBD	32713	
b. Core Infrastructure Planning Support	Allot	USASMDC		13260	10/1/98	12255	10/1/99	11305	10/1/00	Cont.	36820	N/A
c. Core Infrastructure Planning Support	Allot	USAF		6731	10/1/98	11193	10/1/99	5165	10/1/00	Cont.	23089	N/A
d. Core Infrastructure Planning Support	Allot	JNTF		294	10/1/98	0	10/1/99	375	10/1/00	Cont.	669	N/A
e. Core infrastructure Planning Support	Allot	USN		1161	10/1/98	4782	10/1/99	749	10/1/00	Cont.	6692	N/A
f. Core Infrastructure Planning Support	MIPR	Various		2533	TBD	3354	TBD	2455	TBD	Cont.	8342	N/A
g. T&E Technical Support	CPFF	SRS Technologies, Arlington, VA		878	1 June 98	814	1 June 99	698	TBD		2390	
h. Gov Project Personnel Support	Allot	USASMDC, Huntsville, AL		558	10/01/98	477	10/01/99	473	10/01/00	Cont	1508	
Subtotal Management Services:				41428		49575		21220			112223	
Remark:												
Project Total Cost:				41428		51909		23759			117096	
Remark:												
<div style="display: flex; justify-content: space-between; padding-top: 20px;"> <span>Project 3360</span> <span>Page 37 of 39 Pages</span> <span>Exhibit R-3 (PE 0603874C)</span> </div>												

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>					PROJECT <b>4000</b>	
COST (In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
4000 Operational Support	0	7014	10626	10944	11175	11346	11820	12088	Continuing	Continuing

  

**A. Mission Description and Budget Item Justification**

**Justification**

This project provides support in three basic areas: personnel and related support costs; funding to meet fluctuation costs and contract terminations; and assistance required to fund support service contracts for the Theater Missile Defense (TMD) program..

Personnel and related support costs common to all TMD projects include support of the Office of the Director, Ballistic Missile Defense Organization and his staff located within the Washington, D.C. area, as well as BMDO's Executing Agents within the US Army Space & Strategic Defense Command, U.S. Army PEO Missile Defense, U.S. Navy PEO for Theater Defense, U.S. Air Force PEO office, and the National Test Facility. This project supports funding for overhead/indirect personnel costs, benefits, and infrastructure costs such as rents, utilities, supplies, etc.

The BMDO prioritizes funding within this project to meet operational, contractual, and statutory fiscal requirements for the TMD program. Operational requirements include reimbursable services acquired through the Defense Business Operating Fund (DBOF), such as accounting services provided by the Defense Finance and Accounting Service (DFAS). Contractual requirements include reserves for special termination costs on designated contracts and provisions for terminating other programs as required. BMDO has additional requirements to provide for foreign currency fluctuations on its limited number of foreign contracts. Finally, statutory requirements include funding for charges to canceled appropriations in accordance with Public Law 101-510.

Assistance required to support BMDO overhead management functions for the TMD program is contained in this project. This assistance ranges from operational contracts to fully support functions such as ADP operations, automated tool, Access control offices, and graphics support, to supportive efforts required, as well as to supplement the BMDO government personnel. Typical efforts include cost estimating, security management, contracts management, strategic relations management and information management. These efforts include assessment of technical project design, development and testing, test planning, assessment of technology maturity and technology integration across BMDO projects; and support of design reviews and technology interface meetings. Program control tasks include assessment of schedule, cost, and performance, with attendant documentation of the many related programmatic issues. The requirement for this area is based on most economical and efficient utilization of contractors versus government personnel.

The Fiscal Year 1996 Defense Authorization Act eliminated the management program element effective with the Fiscal Year 1997 President's Budget submission. This overhead management and indirect program support funding has been realigned in accordance with Public Law 104-106.

**FY 1998 Accomplishments:**

- N/A

Project 4000

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>			
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>					PE NUMBER AND TITLE <b>0603874C BMD Technical Operations</b>			PROJECT <b>4000</b>			
Total 0  <b>FY 1999 Planned Program:</b> • 7014 Continue providing management and support for overhead/indirect fixed costs such as civilian payroll, travel, rents & utilities and supplies. Total 7014  <b>FY 2000 Planned Program:</b> • 10626 Continue providing management and support for overhead/indirect fixed costs such as civilian payroll, travel, rents & utilities and supplies. Total 10626  <b>FY 2001 Planned Program:</b> • 10944 Continue providing management and support for overhead/indirect fixed costs such as civilian payroll, travel, rents & utilities and supplies. Total 10944											
<b>B. <u>Other Program Funding Summary</u></b>		<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To Compl	Total Cost
<b>C. <u>Acquisition Strategy:</u></b>											
<b>D. <u>Schedule Profile</u></b>		<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
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